THE EDUCATOR.

"Promote, then, as an object of primary importance, institutions for the general diffusion of knowledge."—WASHINGTON.

VOL. II. LAFAYETTE COLLEGE, EASTON, PA. THURSDAY AUGUST 1, 1839. No. 3.

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THE TERMS.—VOL. II.

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Continued.

LIFE OF THOMAS TELFORD.

ABRIDGED FROM THE LONDON QUARTERLY REVIEW.

While the repairs in Shrewsbury castle were in progress, the county magistrates determined to build a new goal, and, as the site was adjacent to the castle, they engaged Mr. Telford to supert intend the execution of the work. Howard had at that time acquired a sort of general control over goals and hospitals; and, as the county goals at Oxford and Gloucester had already been built upon his principle, the Salop magistrates procured a plan in conformity to them, from Mr. Haycock, a Shrewsbury builder. Before the building was begun, Howard, in the course of his visitations, came to Shrewsbury, and upon examining the plan, directed Mr. Telford to inform the magistrates, that in his opinion the interior courts were too small and not sufficiently ventilated, and that the bonndary-wall ought to be at a greater distance from the buildings; he also noticed sundry inferior matters as to the chapel and other points. Upon Mr. Telford's making this statement to the magistrates, they directed him to alter the plans so as to make all the alterations which Howard had suggested; such was the authority which that remarkable man had obtained by his virtues, and such the disposition of the magistrates to promote every object which seemed to be for the general good.

"Telford now became regularly employed as the surveyor of an extensive county, which is intersected by one of the most considerable rivers in the kingdom, with sundry inferior streams falling into it; the bridges therefore required for the intercouse of a populous vicinity are numerous, and their maintenance requires a considerable levy of county-rates. The greater number of bridges, being over the secondary streams, are of moderate dimensions; but the rebuilding of a Severn bridge is an important and expensive undertaking. And such a work was the first of its kind for which, as county surveyor, he was required to furnish a plan, and afterwards to superintend the execution. It was at Montford, about four miles west of Shrewsbury, on the road to North Wales. At this place the river channel is deep and narrow, and its bed and eastern bank are alluvial earth. The bridge consists of three elliptical arches, one of fifty-eight feet, and two of fifty-five feet span each, the breadth twenty feet; and, the river being subject to high floods, considerable difficulty was experienced in the foundations. But coffer-dams being employed, the structure was rendered sufficiently secure. When Telford drew up his narrative, it had been completed more than forty years, and remained quite perfect.

The next of his Severn bridges was at Buildwas, about ten miles below Shrewsbury. The old bridge there, being apparently of the same age as the ruins of the adjacent abbey, which is of Norman architecture, he supposes to have been built by Roger de Montgomery or his immediate successor. It consisted of narrow arches, which were a great obstruction to the navigation; and it was destroyed by an uncommon high flood in the year 1795. The Severn bridges were peculiarly liable to this danger; for, while the low lands at the foot of the Welsh mountains remained unenclosed, the floods speedily covered the flat ground, not deeply, but to a great extent of surface, and drained gradually off; but after these lands were embanded, and the floods were thus confined to the natural channel, they rose in it to a greater height than formerly, and passed off with greater velocity; thus the bridges were endangered, and the navigation injured, there being too much water at one season, and at another not enough. The destruction of Buildwas Bridge led Telford to consider the mode of bridge-building which the Coalbrookdale iron masters and the well-known John Wilkinson had introduced about twenty years before. They and the architect, he observes, 'deserve great credit for introdncing a new material, and for the manner in which they erected the great ribs, each of which (in a semicircular arch of 100 feet span) consists of two pieces only; but they had not disengaged their ideas from the usual masonry arch, the form of which in iron is not graceful; nor does it offer sufficient resistance against the pressure of earth behind the abutments, which has pushed them forward, and thus raised the iron arch in the middle. The original design for the Coalbrookdale Bridge, which formed an era in bridge-building, was made by Mr. Thomas Farnolls Pritchard, an architect resident at Shrewsbury, and 'I consider it,' says Telford, 'only justice to the ingenious artist to record his merit on this occasion.' It is, indeed, pleasing to observe with what characteristic kindness he has on every occasion rendered justice to the merits of those who had taken any considerable part in the great works executed under his superintendence.

In forming the design for Buildwas Bridge, which was the second one of cast-iron, he made the arch 130 feet span; 'the roadway rested on a very flat arch (the segment of a very large circle), calculated to resist the abutments (if disposed to slide inwards as at Coalbrookdale), while the flat arch was itself sustained and strengthened by an outer arched rib on each side of the bridge springing lower than the former, and also rising higher, thus introducing more of the principle of timber-trussing than of masonry. As the roadway could not with propriety be raised to a great height, advantage was taken of the Schauffhaussen principle, by making the outer ribs rise to the top of the railing, and connecting them with the lower ribs by means of dove-tailed king-posts. Each of the main ribs of the flat arch consists of three pieces, and at each junction they were secured by a grated plate which connects all the parallel ribs into one frame; the back of each abutment is in a wedge shape, so as to throw off laterally much of the pressure of the earth; and under the bridge is a towing-path on each side of the river.

Besides Montford and Buildwas Bridges, forty smaller ones were built under Telford's direction in the county of Salop. About this time also (1796) two of considerable magnitude were built under his directions; one over the Severn at Bewdley, where, all circumstances being favorable, there were no difficulties to be overcome—

'The other bridge was in Scotland, at Tongueland, near the town of Kirkcudbright, over the river Dee, where the tide rises upwards of 20 feet, the depth at low water being there 10 feet; the banks are high and rocky: it was here necessary to cross the river by one arch of 112 feet span. To support with centering an arch of this magnitude was an arduous task, the water at an ordinary spring tide being 30 feet in depth, and moving with considerable velocity; the arch was, however, successfully turned, without any accident whatever. The rise of the arch being considerable, caused high wing walls and deep spandrills; wherefore the mass of wings was perforated, and the pressure reduced by narrow arched openings; in the spandrills (instead of filling them with earth) were built a number of longitudinal walls—in fact, interior spandrills—their ends abutting against the back of the archstones and the cross walls of each abutment; these longitudinal walls are connected and steadied by the insertion of tie-stones; and at a proper depth under road way the spaces between them are covered with the flat stones, so as to form a platform for the road; and in these spaces are arched openings for occasional examination and repair, if ever it becomes necessary. I have since practised this mode, in order to lessen the weight

incumbent upon the large arches, and the pressure outward against high wing walls and spandrills; whereas formerly they were filled with soft spongy earth or clay; in consequence of which at the bridge originally built over the North Loch at Edinburg, and also at other places, the side walls have been pressed outwards and actually thrown down. The internal elevation of Tongueland Bridge is turreted and embattled. The total cost of the bridge's immediate approaches was £7,710. The foundation stone was laid 28th March, 1805; the bridge passable Nov. 1806. It is worthy of remark, that in the mouth of the Kirkcudbright River Dee spring-tides rise 25 feet; whereas, at other places round the neighbouring coast of Scotland, spring-tides only rise 25 feet; whereas, at other places round the neighbouring coast of Scotland, spring-tides only rise from 14 to 16 feet; the trumpet-like shape of the sea-entrance admitting so large a quantity of tide as cannot otherwise dispose of itself than by rushing up hill, as in the Firth of Forth, and more remarkably in the British Channal.'

To be Cont nued.

From Spurzheim on Education.

EXERCISE.

I have already mentioned that I employ the word exercise as synonymous with putting into action. Now the first law of this kind is, that exercise strengthens powers. This principle is quite general throughout nature, and extends even to inanimate bodies. Musical instruments being played on by masters in the art, improve. The power of a magnet to support weight may be increased, by gradually appending to it more.—Every power, both in automatic and animal life, may be exercised, and thereby gains in activity. There is something analogous even in the diseased state. Each organic part, having once been affected by any disorder, is liable to relapses; in the same way as, according to the first meaning of habit, by repetition and continuation many diseases are exhausted.

The digestive organs may not only be accustomed to various ailments, but they become also more active by being satisfied. In persons who spit out the saliva, the glands secrete more abundantly. All muscles which are exercised increase in strength. Smiths, and those who use their arms, acquire more power than those who seldom employ them. Bodily exercise in general strengthens; and a sedentary life weakens the constitution.

The influence of exercise on the functions of the five senses, is generally known and admitted. The sense of feeling often acquires a very high degree of perfection in persons who are blind. In the first volume of Phrenology, speaking of the generalities of the external senses, I have quoted many examples which prove, that they become more active by practice.

It is the same with the internal faculties manifested by means of the different parts of the brain. Each mental power, if it be sufficiently cultivated, grows more energetic, whilst if neglected, it shows less activity.

In this chapter on the Laws of Exercise, I take for granted, that all dispositions are innate and discovered. I refer for the details of this important proposition to the first vol. of Phrenology. Hitherto philosophers have admitted a few general powers, and have derived from them all particular manifestations. The greater number of them consider the intellect as the cause of the feelings. Accordingly, they confine education to the understanding, and do not think of cultivating the feelings themselves. This however, is a great error, and the first thing to be done is to specify the primitive powers of the mind; and then, as they exist independently of each other, every one must be exercised for itself. The legs or arms will not be strengthened by reading treatises on muscular motion. The digestive organs will not act with more energy in those who know all the theories which have prevailed on digestion, and who are even able to explain the causes of hunger and thurst. Let such persons have but little to eat and drink, and give to others who have never heard of any theory of alimentation, wholesome food in abundant quantity, and every intelligent reader will perceive whose appetite and digestive functions will be exercised to the best advantage.

Let any one study the principles of optics merely in books and in descriptions; let him learn by heart all the theories of colors, but never see any color, nor feel their harmony. He may, like a blind man, recollect all the expressions used in painting, but without practical instruction his faculty of coloring will not improve.

Who will pretend to cultivate the musical talent only by reading discourses about the principles of melody and harmony? Is it not necessary for this purpose to perform tunes, or to hear them performed by others, either in singing or in playing on a musical instrument?

It is the same with all intellectual faculties. Each must be exercised or put into action for itself. Thus, to cultivate the power of numeration, the numbers must be shown in real objects. To exercise the power of locality, it is not enough to know the names of each town, river, sea, &c. but their respective situations must be acquired. Some children easily recollect names and geographical descriptions by heart, but feel great difficulty in learning local situations; while others present to themselves, in their own minds, an exact image of localities, the names of which they have forgotten. When children are obliged to trace maps, it is not always those who know the localities the best that have the greatest power of tracing them on paper. The fundamental faculties must be separated in every study. In geography, for instance, a perfect knowledge requires the exercise of individuality, of form, size, locality, and language. In order to draw maps, constructiveness is required in addition. The latter power will be assisted by order and numeration.

The intellectual faculties of man have improved less by education than they might have done, in consequence of two reasons, first, of the primitive powers of the understanding not being known; and second, of the difference between sensations and perceptions on the one hand, and the artificial signs, either sounds or figures, which express them, on the other, not being attended to.

To proceed as if artificial signs could produce sensations and perceptions, while they can only call those ideas into recollection which have preexisted in the mind, does incalculable harm. The old system of education however, is conducted in this faulty manner. Children learn and repeat words without meaning, like parrots. But it ought to be admitted as a general principle, in communicating every kind of positive knowledge of the external world, that, first, sensations and perceptions must be excited, and these then denoted by particular signs. In that way only we shall avoid the great mistake to which we are accustomed from infancy, viz. of pronouncing words without knowing their signification.

The vocal or written signs are to be used only as means of communication, of recollection and tradition; but they cannot be considered as the cause of any idea or sensation. On the other hand, each intellectual faculty must be exercised by practical application, in the same way as the sense of hearing is excercised by hearing, that of smelling by smelling, that of sight by seeing.

With respect to the feelings, education is still more defective. It is commonly believed that it is more difficult to cultivate the propensities and sentiments than the intellectual powers. It is even said that the feelings cannot be taught. This proposition, however is not clearly stated. The feelings cannot be taught, if by this proposition we mean, that they may be given by education; in this sense also understanding cannot be communicated. Both intellect and feelings are innate or given by the Creator, but the latter may be exercised in the same manner as the intellect, not by the action of the faculty of language, or by learning signs, or by exercising the verbal memory, but by putting the feelings themselves into action. I even think that it is much easier to exercise the feelings than the intellectual powers.

It cannot be too frequently repeated, that the feelings do not result from the intellect, any more than intellect is the result of the feelings. No one is benevolent, just, timid, courageous, haughty, or affectionate, in proportion to his understanding, nor has he penetration on account of his feelings. Moreover, each affective, as well each intellectual faculty, must and may be exercised for itself. Man learns to be courageous, circumspect, ambitious, just, or benevolent, as he learns to sing, to calculate, to measure, to speak, and to reflect. When often exposed to danger, he learns to meet death without fear. By habit he becomes indifferent to destruction. The heart, as the Chinese proverb states, goes farther than understanding.

Thus, bring men into favorable situations, calculated to call forth their feelings, and these will be strenghtened. In order to cultivate benevolence, one should not frequent only the society of rich and opulent persons, and learn by heart descriptions of charity; he must experience misery himself, and contemplate the painful situations of others. There are more poor willing to give charity from their necessity, than rich from their superfluity. If all our whims and fancies have generally been satisfied, the feelings of conscientiousness and benevolence towards others are less excited, than if our wishes have been contradicted and reformed. For the same reason moral feelings will not improve by frequenting places of debauchery.

He that follows his recreation instead of his business, shall in a little time have no business to follow.

The superiority of some men is merely local. They are *great*, because their associates are *little*.

As the mind must govern the hands, so in every society, the man of intelligence must direct the man of labor.

CAPTURE OF THE SPERM WHALE.

From Natural History of the Sperm Whale.

BY THOMAS BEALE, LONDON, 1839.

'Let the reader suppose himself on deck of a South-Sea-man, cruising in the North Pacific Ocean, at its Japanese confine—he may be musing over some past event, the ship may be sailing gently along over the smooth ocean, every thing around solemnly still, with the sun pouring its intense rays with dazzling brightness: suddenly the monotonous quietude is broken by an animated voice from the mast-head, exclaiming "There she spouts!" The captain starts on deck in an instant, and inquires "Where away?" But perhaps the next moment every one aloft and on deck can perceive an enormous whale lying about a quarter of a mile from the ship, on the surface of the sea, having just come up to breathe—his large "hump" projecting three feet out of the water—when at the end of every ten seconds the spout is seen rushing from the fore-part of his enormous head, followed by the cry of every one on board, who joined heart and soul in the chorus of "There again!" keeping time with the duration of the spout. But while they have been looking a few seconds have expired—they rush into the boats, which are directly lowered to receive them—and in two minutes from the time of first observing the whale three or four boats are down, and are darting through the water with their utmost speed towards their intended victim, perhaps accompanied with a song from the headsman, who urges the quick and powerful plying of the oar with the common whaling chant of

"Away, my boys away, my boys! 'tis time for us to go."

'But while they are rushing along, the whale is breathing; they have yet perhaps some distance to pull before they can get a chance of striking him with the harpoon. His "spoutings are nearly out," he is about to descend, or he hears the boats approaching.* The few people left on board, and who are anxiously watching the whale and the gradual approach of the boats, exclaim "Ah, he is going down!" Yet he spouts again, but slowly; the water is again seen agitated round him; the spectators on board with breathless anxiety think they perceive his "small" rising in preperation for his descent. "He will be lost!" they exclaim, for the boats are not yet near enough to strike him—and the men are still bending their oars in each boat with all their strength, to claim the honor of the first blow of the harpoon. The bow boat has the advantage of being the nearest to the whale; the others, for fear of disturbing the unconscious monster, are now doomed to drop astern. One more spout is seen slowly curling forth—it is his last, this rising—his "small" is bent, his enormous tail is expected to appear every instant, but the boat shoots rapidly alongside of the gigantic creature. "Peak your oars!" exclaims the mate, and directly they flourish in the air; the glistening harpoon is seen above the head of the harpooner; in an instant it is darted with unerring force and aim, and is buried deeply in the side of the huge animal. It is "socket up;" that is, it is buried in his flesh up to the socket which admits the handle or "pole" of the harpoon. A cheer from those in the boats, and from the seamen on board, reverberates along the still deep at the same moment. The sea, which a moment before was unruffled, now becomes lashed into foam by the immense strength of the wounded whale, who with his vast tail strikes in all directions at his enemies. Now his enormous head rises high into the air, then his flukes are seen lashing everywhere, his huge body writhes in violent contortions from the agony the "iron" has inflicted. The water all around him is a mass of foam, some of it darts to a considerable height—the sounds of the blows from his tail on the surface of the sea can be heard for miles!

'"Stern all!" cries the headsman; but the whale suddenly disappears; he has "sounded;" the line is running through the groove at the end of the boat with lightning-like velocity; it smokes—it ignites, from the heat produced by the friction—the headsman, cool and collected, pours water upon it as it passes. But an oar is now held up in their boat; it signifies that their line is rapidly running out; two hundred fathoms are nearly exhausted: up flies one of the other boats, and "bends-on" another line, just in time to save that which was nearly lost. But still the monster descends; he is seeking to rid himself of his enemies by descending into the dark and unknown depths of the vast ocean. They next bend on the "drougues," to retard his career, but he does not turn; another and another have but slight influence in checking the force of his descent; two more lines are exhausted—he is six hundred fathoms deep! "Stand ready to bend on!" cries the mate to the fourth boat (for sometimes though not often, they take the whole four lines away with them—800 fathoms!); but it is not required, he is rising. "Haul in the slack," observes the headsman, while the boat steerer coils it again carefully into the tubs as it is drawn up. The whale is now seen approaching the surface; the gurgling and bubbling water which rises before also proclaims that he is near; his nose starts from the sea; the projecting spout is raised high and suddenly, from his agitation. The "slack" of the line is now coiled in the tubs, and those in the "fast" boat haul themselves gently towards the whale; the boat-steerer places the headsman close to the fin of the trembling animal, who immediately buries his long lance in the vitals of the Leviathan, while, at the same moment, those in one o. the other boats dart another harpoon into his opposite side, when "Stern all" is again vociferated, and the boats shoot rapidly away from the danger.

'Mad with the agony which he endures from these fresh attacks the infuriated "sea beast" rolls over and over, and coils an amazing length of line around him; he rears his enormous head, and, with wide-expanded jaws, snaps at every thing around; he rushes at the boats with his head—they are propelled before him with vast swiftness, and sometimes utterly destroyed.

'He is lanced again when his pain appears more than he can bear; he throws himself in his agony, completely out of his element; the boats are violently jerked, by which one of the lines is snapped asunder; at the same time the other boat is upset, and the crew are swimming for their lives. The whale is now free! He passes along the surface with remarkable swiftness, "going head out; but the two boats that have not "fastened,' and are fresh and free, now give chase, the whale becomes exhausted, from the blood which flows from his deep and dangerous wounds, and the 200 fathoms of line belonging to the overturned boat, which he is dragging after him through the water, checks him in his course: his pursuers again ovetake him, and another harpoon is darted and buried deeply in his flesh.

'The men who were upset now right their own boat, without assistance from the others, by merely clinging on the side of her, by which she is turned over, while one of them gets inside and bales out the water rapidly with his hat, by which their boat is freed, and she is soon again seen in the chase.

'The fatal lance is at length given—the blood gushes from the nostril of the unfortunate animal in a thick black stream, which stains the clear blue of the ocean to a considerable distance around the scene of the affray. In its struggles the blood from the nostril is frequently thrown upon the men in the boats, who glory in its show!

'The immense creature may now again endeavor to "sound," to escape from his unrelenting pursuers; but it is powerless—it soon rises to the surface, and passes slowly along until the death-pang seizes it, when its appearance is awful in the extreme.

'Suffering from suffocation, or some other stoppage of some important organ, the whole strength of its enormous frame is set in motion for a few seconds, when his convulsions throw him into a hundred different contortions of the most violent description, by which the sea is beaten into foam, and the boats are sometimes crushed to atoms, with their crews.

'But this violent action being soon over, the now unconscious animal passes rapidly along, describing in his rapid course a segment of a circle. This is his "flurry," which ends in his sudden dissolution. And the mighty rencontre is finished by the gigantic animal rolling over on its side, and floating an inanimate mass on the surface of the crystal deep, a victim to the tyranny and selfishness, as well as the wonderful proof of the great power of the *mind* of man.'—pp. 161-167.

* Both the ear and the eye of the sperm whale are more complicated and powerful than the corresponding organs in the other whales.

We are pleased to see such notices and efforts as the following, which we copy from the Mount Pleasant Regisier, Westmoreland Co. Let the periodical press do its duty in the matter of education and the cause must advance.

LYCEUMS.—We expressed a hope two weeks since, that the citizens of our borough would get up a *Lyceum*, as a means of intellectual improvement. We still entertain such a hope—and as a spirit of emulation will sometimes start an enterprise when other motives seem to be powerless, we copy into this number from a Uniontown paper, the proceedings of a meeting held in that borough on the 6th instant, which gave rise to the Fayette County Lyceum."

It is clearly evident that talents and genius must have means of developement, or our *Miltons*—aye, and Washingtons, and Franklins, and so on to the end of the chapter—must remain "mute and inglorious." Let us form an association—originate discussions on interesting subjects—have lectures on chemistry, botahy, astronomy, anatomy, &c. &c., and much benefit will inevitably result to individuals and the public. The new *Borough School-House* will soon be forth-coming, and afford a convenient place of meeting, until the *Town Hall* shall be in readiness for its various important uses.

THE EDUCATOR.

EASTON, PA., AUGUST 1, 1839.

The Annual Commencement, for conferring degrees, in this institution, will be held on Wednesday the 18th day of September next. The Rev. Dr. Phillips, of New York, is to deliver the oration before the Societies. The public examinations will be held on the Saturday, Monday and Tuesday preceding. A card with the particulars, will be issued in due time.

A few of our subscribers have apparently, lost sight of the 3d item in our TERMS; viz: "A failure to notify a discontinuance before the close of the year or volume, is an engagement for the succeeding year. No paper will be discontinued until the arrears are settled, except at our own discretion." This is almost a universal condition of newspapers: and it is both just and equitable. It is a very easy mode of extending a contract. It is peculiarly important to us, as this paper differs in some respects from an ordinary newspaper. It is a regular volume and is designed as a permanent book of reference. We print a considerable number more than we distribute. So that where a person declines receiving the 2d vol. *after* having received the first and 2d Nos. he breaks a set and does us the same injury—puts us to the same expense as if he took it to the end of the year, or volume. The Post-Office arrangements have made the matter of declining so easy and free of expense, that the neglect ought not to be at our cost. We hope those concerned will reconsider the matter. Is it right, after encouraging us to go on, and after receiving one or two numbers, and thus breaking our volumes, to refuse to take the rest? We think you will say No; and we will continue to send at least until farther notified, and until the papers which you refuse to pay for, shall have been all returned.

Thoughts on the question, Ought a Republican Government to secure by Legislative enactment, the Education of youth, and if so what is the best form of such enactment?

Civil society is an ordinance of God. This is obvious, from his having implanted the desire of society in the breast of man, and from the indispensable necessity of some form of society, to the happiness of man, which happiness as a benevolent being he desires. Government, is the organ of society, the instrument by which its ends are accomplished, and if the former, be of divine institution, so must the latter. The first duty of every Government, is self-preservation, inasmuch as with this only can its functions be performed, and the ends of society attained. The means of self-preservation, which a Government must adopt, depend on its form. In a republic, the people are the fountain of power, and the will of the majority is law. To the preservation of such a government, virtue and intelligence on the part of the people are indispensably requisite—intelligence to discern what is right, virtue to choose it, otherwise the will of the people becomes tyranny and the objects of society are frustrated. If then it can be shewn, that the diffusion of virtue and intelligence among the people, can only be secured by making legal provision for the education of youth, the affirmative of the first part of the above question is established.

The choice is between leaving each parent to educate or not educate his children at pleasure, and providing by law that every child shall pass through a certain course of intellectual and moral discipline. The objections to the former mode are,

1st. Many parents will neglect the education of their children. Ignorant parents undervalue instruction. Not having enjoyed the advantages of a good education themselves, they feel no anxiety to secure them for their children. Covetous parents grudge the necessary time and expense. Their children are useful at home. They express no desire to acquire learning. And why should the parents deprive themselves of their childrens' services, and incur expense in forcing upon them that for which they have no relish? Vicious and immoral parents neglect this duty as they do other duties. It cannot be expected that they should deny themselves to procure advantages for their children, which they themselves either never enjoyed, or have perverted and abused.

2d. Children are often deprived of their parents, by death or otherwise. If even parental affection prove too weak a counterpoise for the motives which lead to a neglect of this duty, what are we to expect when this principle is absent? Humanity will lead many to provide food and clothing who will feel no impulse to furnish the means of instruction.

3d. To whatever cause we are to ascribe it, experience shews, that the result of the system under consideration is to leave a large proportion of the population uneducated. In 1817 one thirty-fifth part only of the population of France were receiving instruction, whereas in Prussia in 1831 under a different system the proportion was one-sixth. Governor Campbell in his message of Jan. 7, 1839 to the Senate and House of Delegates of Virginia, gives the result of enquiries for ascertaining the proportion of those applying for marriage license in that state unable to write. In 1817 out of 4682 applicants 1127 were unable to write. In 1837, after the present school system had existed twenty years, out of 5714 applicants 1047 were unable to write their names. "From which it appears, says the Governor, that there still exists a deplorable extent of ignorance and that in truth it is hardly less than it was twenty years ago." Governor Clark in his message of 4th Dec. last, to the Senate and House of Representatives of Kentucky, states that the probable number of uninstructed children within the state, may be arrived at from the computation of those most familiar with the subject, that at least one third of the adult population of the State are unable to write their names. The annual report of the Secretary of the Board of Commissioners of Common Schools in Connecticut for 1839, contains the following statement. "The number of children between the ages of four and sixteen not attending any school, public or private, is 4770 out of the districts which have made any returns on this point. * * * Judging from official returns, from my own inquiries and the examinations made by school associations which have been communicated to me, I am satisfied that not less 6000 children between the ages of four and sixteen, were in no school whatever, during the past winter, out of the 1218 districts returned—and probably not less than 8000 in the State." This is an appalling statement, 8,000 children growing up in igrorance, out of 67,000 the total number of children in the State, between the ages of four and sixteen, and this too in one of the most favorably situated states of the Union. If an investigation equally thorough, were instituted throughout the Union, the result would probably astonish those who are satisfying themselves that all is well.

The necessity of State interference being established, the question recurs, what is the best form of such interference?

We answer. 1st. The providing the means of gratuitous instruction is not sufficient. In the case of Connecticut these exist. The annual dividends of the School Fund amounted to $104,900. The income of the Town deposite fund to over $33,000. The building and repairs of schoolhouses and expense of fuel are defrayed by a district tax.

Hence, as the schools are open at an average, only 8 months in the year—as the average wages of male teachers is $15 48, and of the female $8 33, and as one fifth of all the children attend private schools whose share of the fund goes to the others, there is rarely a necessity for exacting any payment from the parents of children attending the public schools. Yet one-eighth nearly of the whole number of children are attending no school whatever.

The non-attendance of many of the children is not the only evil consequent on this system. The provision for its support, is almost in every instance, inadequate to the purpose. To make it serve, the schools are kept open for a shorter period than they ought, and the remuneration of the teacher is made such as to discourage qualified persons from entering on the employment. Parents who value education, if in circumstances to do so, withdraw their children from the public schools and establish private schools. The employment in these being permanent, and the remuneration higher, these schools draw to themselves the best qualified teachers. The common schools deprived at once of the pupils and teachers, whose presence is of the highest importance to their success, gradually deteriorate and the end of public instruction is in a great measure defeated even in reference to those children who continue to attend them. The process now alluded to is described in the Report of the School Commissioners both of Massachusetts and Connecticut. The same process is in progress in Pennsylvania. In Connecticut where the number of parents who appreciate the value of education is greater, the Report states that, "there cannot be less than 10,000 children under 16 years in private schools at an aggregate expense of not less than $200,000 for tuition alone, more than is now paid for teachers wages in all the public schools of the State."

2d. The experience of Connecticut shews, that the enactment of laws asserting and enforcing the duty of education upon parents and guardians is not sufficient.

The law of Connecticut declares, "All parents and those who have the care of children, shall bring them up to some lawful calling or employment, and shall teach or instruct them, or cause them to be instructed to read, write and cypher as far as the four first rules of Arithmetic." In case of neglect, the Select Men may admonish the parent in the first instance, and for repeated disregard of the law, they are directed to take such children from their natural guardians and bind them out "where they may be properly educated and brought up to some lawful employment."

The facts already stated shew that this law has become a dead letter in Connecticut. No where, we fear, in the Union, could such a law now be enforced. And yet its justice is obvious. If civil government be of divine institution, and a republic cannot exist without a certain measure of virtue and intelligence in its citizens, the imparting of the requisite instruction, is unquestionably a moral obligation on parents, and one which for its own sake, society ought to enforce.

We remark 3dly. That the least objectionable method of enforcing this duty, is probably to declare the elective franchise contingent on school attendance or proficiency. This plan was proposed by Lord Brougham in England, and is noticed with approbation in the Report for Connecticut. The elective franchise is unquestionably a trust held by the individual for the benefit of society, and requiring certain moral and intellectual qualifications for its due exercise. Of the possession of such qualifications society is entitled to demand some guarantee. Now the simplest test of intellectual qualifications, is the ability to read and write, ascertained either by actual trial or by attendance for a prescribed period on the public schools, established for this purpose by the State or a licensed private school. There can be no hardship in requiring attendance on the public schools, since they are open to all. And there can be no injustice in withholding the elective franchise from those who neglect the simple preparatory qualification stated above, inasmuch as their ignorance is voluntary and it virturally incapacitates them for the exercise of the trust to which they aspire.

We invite discussion on this question. In the language of the excellent Report to which we have so often referred. "Whoever shall discover a mode of securing a certain degree of instruction on the part of every individual of society, without violating the spirit of the age and our institutions, will do more to advance the cause of civilization, and our own and American liberty, than we can conceive it possible to do in any other way."

From the Teacher.

HATS AND BONNETS.

The master of a district school was accidentally looking out of the window one day, and he saw one of the boys throwing stones at a hat, which was put up for that purpose upon the fence.

He said nothing about it at the time, but made a memorandum of the occurrence, that he might bring it before the school, at the proper time. When the hour, set apart for attending to the general business of the school, had arrived, and all were still, he said,

"I saw one of the boys throwing stones at a hat to-day, did he do right or wrong?"

There were one or two faint murmurs which sounded like "*Wrong*," but the boys generally made no answer.

"Perhaps it depends a little upon the question whose hat it was. Do you think it does depend upon that?"

"Yes sir."

"Well, suppose then it was not his own hat, and he was throwing stones at it without the owner's consent, would it be plain in that case, whether he was doing right or wrong?"

"Yes sir; wrong," was the universal reply.

"Suppose it was his own hat, would he have been right? Has a boy a right to do what he he pleases with his own hat?"

"Yes sir," "Yes sir," "No sir," "No sir," answered the boys confusedly.

"I do not know whose hat it was. If the boy who did it is willing to rise and tell me, it will help us to decide this question."

The boy knowing that a severe punishment was not in such a case to be anticipated, and in fact, apparently pleased with the idea of exonerating himself from the blame of wilfully injuring the property of another, rose and said,

"I suppose it was I, sir, who did it, and it was my own hat?"

"Well," said the master, "I am glad you are willing to tell frankly how it was; but let us look at this case. There are two senses in which a hat may be said to belong to any person. It may belong to him because he bought it and paid for it. In other words a person may have a hat, as his property, or he may have it only as a part of his dress. Now you see, that according to the first of these senses, all the hats in this school, belong to your fathers. There is not in fact a single boy in this school who has a hat of his own."

The boys laughed.

"Is not this the fact?"

"Yes sir."

"It certainly is so, though I suppose James did not consider it. Your farthers bought your hats. They worked for them, and paid for them. You are only the wearers, and consequently every generous boy, and in fact every honest boy, will be careful of the property which is intrusted to him, but which strictly speaking is not his own."

A man who gives his children habits of truth, industry and frugality, provides for them better than by giving them a stock of money.

THE OCEAN.

BY A LADY OF NEW YORK.

Majestic Ocean!—Of't in Childhood's days
I've gazed with wonder on thy swelling waves
And shrunk back as thy breathing billows roll'd
Upon the sandy beach—then clambered the banks
With wild grass cro ned; securely thence to look
Upon thy ceaseless motion. Hours and hours
I've lingered wrapt in admiration here
Nor sought to shade my thoughts, nor picture forth
My unconnected feelings, nor pourtray
Thick coming fancies on the mystic page,
It was enough, I saw and felt and loved
The Ocean scene in its magnificience.
Absorbed in its stupendous grandeur then,
I only knew it was a woundrous sight,
Beggaring all description—though there came
A tide of swift ideas; rushing on
Forever as I gazed; but mingling soon
In one broad mass of chaos and confusion.
Thought had no end nor object—it ran wild
Over the waste of waters, and soon lost
Itself in its own wanderings. Oh! the charm
Of those young aimless bright imaginings!
When the whole world like the reflecting sea
Gave back to hope the sunbeams of the heart.

Majestic Ocean! *You* at least by time
Art still unchanged. Here do thy restless waves
Still rise and foam and dash with idle rage
And spend thy fury on the unconscious shore.
Thou lead'st me back through the dim misty shades
Of 'parted years—and while I stand again
Upon thy green topped banks past memories rush
Like myriad moments crowded into one
Together on my mind. I seemed to feel the breath
The breath of early life return again,
Borne on thy bosom changeless Ocean still
The freshing breezes play, and round me came,
Like some sweet spirit of my infancy.
Oh! who would not, when sick of the world's pomp
And vain parade, and emptiness, and pride,
And idle mockeries, and hollow words,
And dreaming fancies, and deceitful show,
Who would not turn to such a scene as this
And gaze unsated, and delight to catch
Some far off, wandering feeling of the heart,
Brought hence by the sublime and beautiful
Of God's created works.

Oh I could watch
Untired a summer's day the beating surge
Casting its glittering spray a thousand ways
With wild fantastic motion, and forget
The fleeting foot of time, since last I looked
Upon the glorious concourse of thy waves
Or heard thy deep mysterious, solemn sound
Since last I viewed the Sea bird's rapid flight
Along thy brink, or o'er thy wide expanse,
(A watery wilderness with dangers spread,)
Skimming its midway course 'twixt sky and sea
On sportive wing—yet ever and anon
Returning to the shore and lighting oft
Upon the sun-bleached sand, fearless and tame
As if the sterile beach, unclaimed by ma.,
Were all its own. Then far beyond the land
Descried the proud ship ploughing through the deep
Braving the perils of the rolling seas
And vacillating to the shifting winds.

Familiar sights again ye rise to view
Still, still the same—and thought becomes more pure,
Drawn from the world and all concentrated here,
Where the wild dreams and passions of the heart
Are swallowed up in the immensity
Of the Creator's wonder-working power.
Oh surely, it were better far to fix
The fancy's musings on the First great Cause
Of all that's fair and beautiful, and grand
In nature, than to keep them chained to earth
And homing o'er its faint and weary hopes
Which linger, half in fear, upon the mind
As conscious they were only there, *to die.*

Roll on thou vast unmeasureable Sea,
Here still shall thy perpetual waters come
Till time is done, and all to nothingness
Once more returned. I may not see perchance
Thy face again. Farewell. Farewell.

PRICES CURRENT.

	Easton. *July* 30,	Phila.
Wheat per bushel,	1 00	1 12
Rye, do.	75	85
Corn, do.	70	83
Oats, do.	50	55
Flour, wheat per bbl.	5 62½	5 87
Rye do. do.	4 25	4 50
Beef,	10	
Hams,	15	
Mackerel,		
Butter,	17	20

TERRACULTURAL.

We invite attention to the advertisement of Easton & Abernethy. In the matter of Silk-Worm Eggs there is great liability to deception as to weight. We bought two ounces, and verily believe there were not more than three-fouths of an ounce of pure eggs; the rest was muslin and would not produce silk-worms. We have no doubt the purchaser will get the genuine egg and the honest quantity from the above named.

The wisdom of feeding a small quantity, as a schooling exercise for next year, is obvious, and we would advise farmers and others having access to mulberry leaves to try it.

The article on "ripening grain," which the reader will find below, is one of very considerable importance. On the staple of Indian Corn, Judge Buel's experiments are decisive. It is *demonstrated* that the cutting up of corn before it hardens is a very material gain to the grain and still more to the value of the fodder. Topping, any man can see exposes the sap to evaporate from the cut, and it is demonstrable that the thick stalks below the ear, have more saccarine or sweet matter in them, than the thin tops. I do hope a number of our farmers will try very accurate experiments this season, and put the question to rest. I have no doubt from a quarter to half a million of dollars may be saved in the U. States by this one improvement. Will not our friends of the Musconetcong Agricultural Society, give us in due time, full and detailed experiments? Laziness is the besetting sin of our race—farmers are not exempt from it. Do let us make an effort and know certainly wherein true policy lies in this matter.

From the Genesee Farmer.

RIPENING OF GRAIN.

"Is it certain, that if corn, or any other sort of grain, be severed from their roots while short of maturity, any valuable accession will afterwards be made to the grain? It is said of unripe corn that the ripening process will go on after the plant is cut up by the roots. So too of wheat, that it will come to perfection, although cut several days before it has arrived to maturity. This, I think, I have witnessed. Some years since, I had occasion to open a way to a meadow which I wished to enter, and I cut a small strip of wheat while so green as to be supposed of no value except for fodder. This was spread on grass, and after a few days, I was surprised to find the berry was good, and but little inferior to that which stood till it was fully ripe. Now, did these wheat kernels, after the cutting, really recieved accessions? or was the alteration caused only by drying and consolidating? If they received accessions, whence came they? from sap ascending from the stems and leaves below, or from the atmosphere? Is it likely that sap moves at all in plants after they have been cut and become wilted?

A FARMER."

We think that experience has plainly decided, that accessions are made to the corn after the stalks are cut at the bottom; and that to nearly or quite as great a degree as if left standing on the hill; and more than if, as was formerly the custom, corn was topped when first beginning to glaze, or early in the season. That corn receives accessions from the stalk after it is cut up, is proved by the fact, that an ear severed from the stalk at the period of glazing, will be very imperfect and the grain inferior, a result not observed when the ear is left on the stalk, though the stalk be severed from the roots. After the formation of the ear commences, the berry is the point to which all the efforts of nature are directed; and this is continued until the process is complete,—the juices desicated and rendered incapable of absorption,—or the supply of nutritive matter exhausted. As the juices become thicker in consequence of the non-supply of sap from the root of the plant, the deposition becomes more active and rapid in the grain; so long as it moves at all, or till the kernel is filled; which will in a part account for the fact, that grain severed from the root, after the proper supply of nutriment for the kernel has been elaborated in the stalk, ripens so much quicker than it would if left attached to the root.

In the case of the wheat mentioned by our correspondent, it is clear the supply of nutritive matter destined for the berry had all been elaborated, and the only material difference in the process of ripening was, that the matter not receiving supplies of sap from the root, was more quickly deposited than it would have been if subject to that dilution; or in other words, it ripened so much earlier. A somewhat similar case occurred to ourselves a few years since. To get at a meadow conveniently, it was necessary to cradle a swath or two throught an oat field. The oats were very heavy, but quite green, so much so that a second growth sprung up from the severed stalks. They were left in the swath until partially hayed, when to clear the ground, they were bound in very small bundles, and set up in a clear place where the air could have free access. Contrary to our expectation, they saved well, and exhibited a finer berry than many of the frost-bitten oats of two or three years past could do, though, very far inferior to those that ripened in the field. In this instance, the substance for perfecting the kernel had not been elaborated in sufficient quantity, hence they were necessarily imperfect. A few days since a farmer assured us, that last year in mowing one of his meadows, in order to cut the whole of a patch of Canadian thistles, he found it necessary to mow a small quantity of wheat that adjoined the grass. As the wheat was only fully in the milk, he concluded it would be of no value and raked it with the hay, where it was raked and cured. On examining some of the heads this winter, to his surprise he found the berry bright and plump, apparently as much so, as that which ripened in the field. These instances, we think, prove that accessions have been made to grain after it is severed from the roots. Drying and consolidation alone, if no farinaceous matter was added, would only shrivel the grain; it could not cause it to remain filled and plump.

As the proper period of harvesting wheat is an object of much importance to the farmer, since the least injury or the least benefit per bushel, amounts to an immense quantity in the aggregate, we shall give the opinion and practice of some of the most eminent British agriculturists in the matter, as such extracts may assist in forming correct conclusions.

In the 2nd vol. of British Husbandry, page 136-7, it is said,—

"The question has been for some time agitated, regarding the state of ripeness in which grain should be reaped; and it has been recommended as a general rule of practice, to cut down the crops before the uppermost grain can be shaken out. * * * Taking these things into consideration, it seems the most prudent plan to have the grain cut before it is fully ripe; but in this a medium course should be adopted; for although grain, if allowed to become too ripe, assumes a dull, husky hue in the sample; yet, if not ripened enough, it shrivels in the drying."

Loudon asserts—"That in harvesting wheat, the best farmers, both in Britain and the continent agree, that it ought to be cut before it comes dead ripe. When this is the case, the loss is considerable, both in the field and in the stack-yard; and the grain, according to Von Thaer, produces an inferior flour."

Cadet de Vaux remarks—"That corn (grain) reaped eight days before the usual time, has the grain fuller, larger, and better calculated to resist the attacks of the weevil. An equal quantity of the corn thus reaped, with corn reaped at maturity, gave more bread, and of a better quality.—The proper time for reaping, is that when the grain, on being pressed between the fingers, has a doughy appearance, like a crumb of bread just hot from the oven."

In the 'Reports on Select Farms,' in the report from the Scoresby farm, worked by Mr. C. Howard, it is said:

"Wheat ought never to be allowed to remain uncut until it is fully ripe. Experiments, easily made, will prove to every cultivator of it, that by permitting it to stand until the straw has lost its succulency, he gains nothing in plumpness or bulk of grain, but loses much in color and fineness of skin; besides which he incurs the risk of shelling, by the high wind, or by its being cut under the influence of a burning sun. When fully ripened by standing in the shock, no dry hour should be lost in getting it well secured."

Such extracts might be multiplied, but it is unnecessary. The observation of every farmer must convince him of the superiority in appearance of color and quality of early cut grain, over that which is dead ripe. One is clear and white skinned, the other dull and dusty, and the effect on the flour is very perceptible. We all remember when the Baltimore flour was considered superior to the northern, and a writer in the Baltimore Farmer assigned as a reason for this inferiority in the flour produced north of Pennsylvania, the practice of allowing the wheat to stand dead ripe in the field, until the berry was discolored. Now the tables are turned, not only as regards the quality of our wheat, but our flour also.

I will here close this otherwise unprofitable communication with an account of the most extraordinary yield of *wheat* in this neighborhood, with which I am acquainted. Col. Polk, the gentleman who made the twenty-six and a quarter bushels of wheat, from one and a half gallons sowing, is a gentleman of the most unquestionable honor and character.

July 11th, 1839—COL. DASHIELL—Sir: I have finished cleaning my wheat, and agreeably to your request I give you the particulars of the wheat raised from one and a half gallons sowing on a piece of ground I suppose to contain about 1 acre; the lot has been used as a yard in front of a dwelling for many years, and has never been in cultivation since my remembrance, say 25 years, and how much longer I cannot say. The cause of my breaking the sod was, the brown sedge had commenced growing, and had taked possession of half the lot. In 1837 in Oct. I commenced breaking the sod, which was very tough; after the ploughing I commenced spiking,

and spiked it over several times.* I then cross-ploughed and spiked it again, but the sward was so very rough I let it lay over until the spring of '38. In March I ploughed, spiked and sowed red clover, and pastured it during the summer. In Oct. I manured with common manure, such as the scrapings of woodpiles and well rotted corn-stalk manure, that had been to cattle the winter previous. I then ploughed, spiked, and sprinkled one and a half gallons common red chaff wheat. The preparation I used with the wheat was to soak one half in strong pork pickle, and the other half in lime that had been air slacked for about 18 hours—in that time the kernels became very large—I then mixed the wheat well with dry ashes, sowed, ploughed and spiked for the last time—On the 2d July, '39 I reaped it and trod it out with horses, when it measured 26¼ bushels wheat, struck measure. I send by the boy 1 bushel, which you will do me the favour to have weighed by an accurate set of scales as I wish to know the weight; the bag containing the wheat weighs ½lb.

Yours respetfully, Jos. G. Polk.

P. S. Show this to Mr. Crifield, as he desired me to give him an account of the proeeeds and manner of cultivation.

☞I do hereby certify that I weighed the above wheat in a patent pair of scales, and that it weighed exactly 60 pounds per bushel.

A. T. H. Jones.

* Spiking, we presume, means working it with the iron tooth harrow.—*Ed.*

From the American Farmer.

Sir—A lady has caused to be published in the Chronicle, that hog's-lard rubbed on a bedstead with a piece of woolen cloth, will prevent the bed-bug from infesting the bedstead.

An extract obtained by stewing Gympson or Jamestown weed, in fish oil, and rubbed on bedsteads and posts, and the wash-boards in a lodging room, is found from practice, to destroy bedbugs and other insects that infest a room during the warm summer months. During the excessive heat and drought of last summer, a lodging room in the third story of an old established brick house on St. Paul's street, was infested with bed-bugs. The extract of Jamestown weed stewed in common fish oil was applied; it destroyed the bugs, and no musquitoes annoyed the person who slept in it. The moth fly and common flies did not appear in the room. Spermaceti whale oil had better be made use of instead of the common fish oil. The South Sea Islanders anoint their bodies with fish oil in order to protect them from the annoyance of insects.

An extract of Gympson or Jamestown weed, made by stewing the leaves and tender stalks in common fish oil, might be applied to seed wheat and corn, with a brush, stirring the heaps, to be kept in a close room ten or fifteen days before sowing or planting. It would be offensive to birds and insects—the germ of the Hessian fly and other insects might be destroyed by it. The quantity of oil required would be inconsiderable; it now sells at 46 cents per gallon.

The extract might be applied to advantage on the roots of peach trees when replanted, and an application of it might be applied to seeds generally.

The extract destroys lice and other insects on animals. A little rubbed on the head and back of sheep when sheared, would prove a vantageous.

Metallic and vegetable poisons are much used in spirits, which are greatly objectionable, on account of the danger of keeping the solution in families. Any poison in fish oil would not be dangerous.

Gympson leaves and tender stalks, stewed in any oil or grease of any kind, until the leaves and stalks become soft, then strained and squeezed through coarse linen fabric, gives an extract which will keep good for use a number of years.

[The above is from a highly respectable source and should any of our readers make any experiments on the hints given therein, they might render a service to the public by making known the results.]

Charcoal Hams.—A writer in the American Farmer recommends to pack Hams, after they have been smoked, in pounded charcoal. It keeps out the flies, and prevents the fetid smell and unpleasant taste too often found in hams exposed for sale.

NEW KIND OF WHEAT.

The Charleston, Va. Press says that "a new kind of wheat, of superior quality, and which yields much more abundantly than any hitherto raised in that country, has been cut the present harvest on the farm of Mr. John Wysong, near Shepherdstown. Mr. W. obtained the seed from Mr. Stonebraker of Maryland, who came into possession of a small quantity by accident two or three years since. From three bushels and three pecks sown by Mr. W. on ground not the most favorable part of his farm for wheat, he will, it is thought, have a yield of at least 125 bushels—some competent judges say 150 bushels. The heads are very large, and contain many more grains than the heads of wheat now generally grown in Jefferson county. It attracts much attention, and is evidently a new and very superior kind of wheat, well worthy the attention of farmers. In a favorable season, and land not unfavorable to the production of wheat, it is believed it will always yield from 40 to 50 bushels per acre."

On the above the American remarks:—We have received some additional particulars respecting this new kind of wheat. It is called *Rock Wheat*, from the circumstance, that some two or thre years ago a single head of wheat, of peculiarly large size and product was seen growing by itself from the crevice of a rock in a wheat field. The head was carefully preserved and the grain sown, and from it has been produced a few parcels which were sown last year by different gentlemen. Two of these parcels found their way to Baltimore, and on account of their remarkably fine quality and the accompanying assurance of their productive character, were bought for seed at the rate of three dollars per bushel. They were sown in the vicinity of our city early in October last, and we are now enabled to state the result of the experiment as made by one of the gentlemen, Mr. Joel Vickers. Three and a half acres of rich well prepared ground, have been found to produce at the rate of *forty-seven bushels to the acre.* The quantity of grain is excellent, and many of the heads were found to contain forty-five grains of wheat. Although it is admitted that, when the character of the land and the favorableness of the season are considered, ordinary grain would have produced a full yield, yet the extraordinary product just stated in the case of Mr. Vickers, as well as in that quoted from the Charlestown Press, proves that the *Rock Wheat* is a valuable species, and well merits the notice of wheat growers.

We insert the following, chiefly because we dissent from it. The first No. of the series pleased us much, and we hope others may follow, like the first. But the present is calculated to promote ignorance and darken the public mind The logic is unsound and the facts misapprehended.

Mr. Holbrook seems to have forgotten that knowledge to become useful, must be that of principles derived from a comparison and arrangement of facts. Habits of classification must characterise the mind where knowledge will be useful. It is only by classifying that general laws are discovered: and it is only by the knowledge of general laws that we can adopt means to the production of ends. Now it is notoriously one of the chief benefits of classical and mathematical studies, that they discipline the mind to accuracy of observation. This is one of their principal advantages. In the absence of this discipline we much question whether any mere shipwright, cabinet-maker or farmer ever became a botanist and extended useful science.

On this mistake as to the principal use of classics and mathematics, Mr. H. proceeds to argue against them; and appeals to facts. We have not access to the work of the Messrs. Michaux, but will venture a guess that they were men, whose minds were prepared by classic drilling for the business entrusted to them. Let us have an example—where are the facts to prove that botany, mineralogy &c. &c. can be studied to practical utility as well without as with the drilling of a classical and scientific course.

The supposed case is equally unhappy. There the knowledge of a name is one thing and that of the thing is another. But query, will Mr. Holbrook's cabinet-maker, brought up in a city and who never saw a walnut, cherry, or Mahogany tree, be any more ready to recognise it if carried to its place of growth than the Latin and Greek scholar!

But again what are the facts! Why, that in general, literary men are better informed as to the uses of the various productions of nature than either farmers or mechanics. Each of these has indeed his own narrow field of observation, and in that is better informed as to facts and appearces, than the classic; but his sphere is more limited, and if he extend it greatly he must be dependent on the classifications of science.

We regret this attempt to prejudice the cause of learning. There are really no counter claims. There is no necessity, to decry literature in order to promote useful knowledge. We wish to see farmers educated, but we do not admire that utilitarianism which would in the end subvert all science. The bounds of human knowledge can be permanently extended only by general principles.

EDUCATION OF FARMERS.

USEFUL KNOWLEDGE.

Mr. Harris:—A lad in a district school, in writing, a few days since, on the uses and usefulness of different branches of knowledge, remarked, that '*the use of a thing is in using it.*" This definition aided the juvenile author greatly, and might possibly aid some learned men and profound philosophers, in forming clear and correct ideas of the term 'USEFUL KNOWLEDGE,' which is probably much oftener repeated than understood. It may be seriously questioned whether, with many, the attention devoted, and the value attached, to the subjects of learning are not nearly in proportion to their uselessness

In a college course, for example, embracing the preparatory studies, and occupying in the whole, from six to eight or ten years, much the greatest portion of the time is devoted to the dead languages and the abstractions of mathematics, and furnishing to many of their pupils, a meagre smattering even of these. How far a knowledge of the Latin and Greek languages, or of the terms used by the Greeks and Romans to express their ideas about their heathen gods, wars, bachanalian feasts, and many other things as little connected with ihe pursuits or duties of American citizens, may properly be considered useful knowledge, is the question; and whether the three or five years, devoted to these languages in a college course, might not produce a greater amount of knowledge more really useful, if employed upon some other subjects. The rights and duties of republican citizens, secured and implied by our constitution and laws, the reciprocal interests, and the relations existing between different classes of citizens, between the employer and the employed, master and apprentice, farmer, mechanic and merchant, men and women, husband and wife, parent and child; also between the different members, or states of our republic, embracing all the fundamental principles of political economy; the physical sciences, embracing the fundamental laws of chemical and other branches of natural philosophy, animal and vegetable physiology, especially of the human system, also geology, mineralogy, and botany, with a particular application of the whole to agriculture and the mechanic arts; and above all the relations existing between the creature and his Creator, and the duties arising from those relations, so clearly, fully and beautifully developed in the volume of inspiration and from natural religion; a familiar practical acquaintance with these and other subjects arising from them and directly connected with republican institutions, and the pursuits of republican citizens, it would seem more deserving the title of useful knowledge, than an acquaintance with merely the terms used by those who lived two thousand years ago, or with the abstract principles of mathematics, with scarcely an idea of their application to any pursuit of business, to morals or religion.

If these views of the subject are correct, and they probably will not be questioned by many, I ask if farmers, especially the more enlightened portions of them, do not possess a greater amount of useful knowledge, than the graduates of our colleges? Does not every enlightened farmer found in our legislatures have greater influence than the mere literary man? Is not his opinion more safe to be trusted?

Could not every practical farmer give the mere botanist, however learned he might be, much useful information about plants? and still more a mere graduate of a college? A fact will perhaps answer the question. In the year 1785 the elder and the younger Michaux, distinguished botanists, visited this country under the direction of the French government, for the purpose of studying American vegetables, especially our forest trees. They were continued on their errand eleven years, when they returned to France and published three large octavo volumes on 'American Forest trees,' which is, by the way, the most sensible work within my knowledge respecting the vegetable kingdom; and respecting American trees, it is the only work of my acquaintance of much value. But that is valuable and interesting to every farmer, and every mechanic, and even to a general reader.

But where did they obtain the materials for their work? Was it from the graduates or professors, or presidents of colleges? Not a particle: and very little from any American botanist.—Much the greatest and the most valuable part of the materials for these very useful volumes, were obtained of this ship builder, and that carpenter, and another cabinet maker, or some other mechanic, and a large portion from farmers.

I will suppose a case on the same subject; a case too, of which many thousands actually exist in our country. Suppose that a scholar, in his five years thumbing his Latin and Greek dictionaries, learns that what we call oak, the Romans called quercus, and the Greeks called the same thing drus. But if an oak and maple tree were shown to him, he could not tell one from the other, or the name or properties of either. Show the same things to an unpretending farmer, and he could inform you that the one was white oak; or black, grey, red or Spanish oak; also of its various uses founded upon its properties. The case is of course, that the scholar has three terms, but not one idea; the former has one or two terms with various ideas connected with each. Here is a learned scholar and an ignorant farmer, but which is the man of knowledge? As the same illustration will apply to hundreds of other subjects, as well as botany, whose ideas are most extended.

The occasion does not permit an extended view or a variety of illustrations of the subject. I must therefore leave it for the present with the question, *Which have* the greatest amount of useful knowledge, farmers or professed scholars? If any should think the latter, I have only to add, that he differs from me in opinion.

With the kind regards of your friend,

J. HOLBROOK.

Cleveland Herald.]

From the Yankee Farmer.

RULES FOR SELECTING NEAT CATTLE.

The rules for selecting for good stock are principally these:—Deep wide shoulders, wide and deep hips, short and straight back bones, round bodies and well ribbed back, short shin bones, short strong necks, small short heads, small pointed noses. If these rules were observed from generation to generation, by our farmers, the neatest breed of cattle that were ever seen, would soon become first rate. A very large creature of any kind, is not so profitable to the farmer, as a good middling size. The main thing is shape. And no farmer should ever sell, at any price, his best and finest shaped animals, if he intends to keep up a good and profitable kind. A gentleman told me lately that he began farming about twenty years ago. He then took a good deal of pains to find and purchase a superior kind of sheep. He could find none on an average better than his own which were mean. He adopted the practice of selecting his best lambs every year, for stock. In a few years he had the first rate sheep. The same course will produce the same effects in every kind of animal.

[The above rules are correct—by wide shoulder the writer means the shoulder blades we presume—not thickness of the shoulder—we doubt about the *depth* of the shoulder for the cow if he mean from the withers to the brisket—In general the good milch cow will be altogether *light before*, getting deeper and more bulky as you go back to the *milk region* of the body—If by short *strong* neck he mean a thick neck, he is wrong—the neck and head of the cow cannot be too light—the chops and muzzle cannot be too neat and clean—a dew lap is odious—The fact is and it may be laid down as a plain general rule, that the more valuable the particular part in question—the more we want of it, and *vice versa*.]

PREPARING SEED WHEAT.

We have occasionally published articles showing the great importance of preparing seed wheat so as to prevent smut, and we have also published various methods of preparing seed, which have proved an effectual remedy against this injury. We would now urge the importance of properly preparing seed wheat, as the cost is trifling, and without this little attention a great loss may be sustained.

A great many methods of preparing seed, in order to prevent smut, have been tried a good number of which proved successful. We consider the following a very easy and convenient method; it is practised extensively and with good success, and the preparation is useful to the wheat as it serves as a manure. One great advantage in this mode, is that if prepared, or partially prepared, it may remain some time before sowed, without injury.

Put about half a bushel of wheat into a tub, and add water, then wash it thoroughly, stirring it violently with a rough stick that it may have a good scrubbing. Then turn in water, stir it and turn off the water, repeating this process several times that all the light stuff may be turned off. Wash another lot, and so proceed till it is all washed.

Then add to the wheat strong salt water, no matter if it be as strong as it can be made, allowing the water to rise above the wheat, and stir it well. The oats, if any, and the light grains of wheat, will rise to the top and should be removed. Let the wheat soak a day, two or three days would be better, and if not convenient to sow, let it remain a week or more. Then drain off the water, and add slaked lime till the what will separate so that it may be sowed conveniently.

We have known cases of grain remaining a week or two in strong salt water without injury. One case was related to us in which the wheat lay in strong salt water a fortnight, the pickle was then drained off, but the wheat remained wet a week longer; then it was dried and kept till the next year, when it was sown and grew well.

Some cases have been published, in which wheat remained a long time after being limed before it was sown, and it grew well.—*Ibid.*

SILK-WORM EGGS.

THE subscribers having been feeding a few thousand Silk-Worms of the two-crop or three-weeks variety, and having procured eggs from them, are now prepared to supply orders for Eggs to a large extent. As there is abundant time to feed a crop this season, it is desirable that all who have TREES, should feed at least a *few* worms, in order to learn their habits, and to prepare themselves for more extensive operations at a future time.

Their price is $15 per oz. *Pure Eggs.*

EASTON & ABERNETHY.

Belvidere, July 24th, 1839.